



Book Review

The Amphibians and Reptiles of Mindo: Life in the Cloudforest

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Title: *The Amphibians and Reptiles of Mindo:
Life in the Cloudforest*

Authors: Alejandro Arteaga, Lucas Bustamante,
Juan M. Guayasamin

Copyright: 2013

ISBN: 978-9942-13-496-7

Publisher: Universidad Tecnológica Indoamérica

Pages: 258; **Price:** \$49.00 (US)

The authors have produced a much needed local field guide for the Mindo parish, located in northwestern Ecuador and set a high standard for future field guides to follow. The book fills a void with great detail and care. It begins with the Table of Contents, a Forward, and Preface. A brief Symbols and Abbreviation page is followed by the Introduction, which leads into a helpful section on locating and observing reptiles and amphibians in the Mindo region. The authors recommend that those interested in exploring Mindo's herpetofauna should do some homework: understand the habitats and environments where herpetofauna can be found, know your subject, keep a low profile, and try not to disturb the sensitive microhabitats in which these unique species are found. Page 11 illustrates some principal identification features of the amphibians of Mindo (as a diagram figure; p. 11). On the next few pages are additional figures that show the groin pattern and color of the Mindo rainfrogs (*Pristimantis*), principal scale types of Mindo lizards, dewlap color of Mindo anoles, and basic terminology for snake scalation. In total the guide features 20 charts and figures, and 228

superb photographs and art work (a special feature and highlight of the book). These figures allow the future explorer of Ecuadoran cloudforests (particularly Mindo) to prepare for an informed and exciting field trip.

The crux of the book are the accounts. The guide features 101 species accounts of Mindo's unique reptiles and amphibians, with each account accompanied with, as mentioned above, outstanding photos and in addition, a range map. The 228 photos are adequate for identifying the target species and have been photographed with a white background, eliminating distracting clutter so the reader can focus on key marks, characteristics, and colors of each species (see Figure 1 for examples). The range maps are up-to-date and reflect the most current research (in total, 4,000 locality records are featured). Each species account has been peer-reviewed by two or more experts (71 total reviewers and hundreds of personal communications from experts). The accounts are divided into several key sections: English and Spanish common names, Latin name with describing author and year, recognition information, natural history, distribution, conservation status, etymology, notes, reviewer and contributor information, and references. Prior to the species account sections is the "Plan of the Book"—this section is a must read in that it explains how species accounts are set up and discusses the rationale of account structure. Additionally, pages 27–29 discusses the Mindo parish; why the area is worthy of continual conservation, and describes the unique characteristics of the region that is home to more than 100 species of reptiles and amphibians in an area smaller than the state of Nevada.

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After the species accounts the book presents a description of a new species of *Pristimantis* found in Mindo (Arteaga et al. 2013). This account illustrates that new species are continually being discovered and regions like Mindo may harbor other new species.

Following the new species description is the Glossary, Reference section (the book lists 1,935 references throughout), and the final section is “about the authors,” listing the scientific illustrators and geographers (Rita Hidalgo, Silvia Cevallos, and Belén Baus).

Overall, the field guide of Mindo is an outstanding contribution to the ever-growing field of herpetology, will help conservation efforts, encourage ecotourism and nature observation, be a high standard for other field guides to follow, among other positive allied outcomes, while linking conservation efforts through its publication. The guide is pleasing to read and should inspire others to write and publish regional guides in species rich areas of the Americas, and, as mentioned several times already, sets a high standard for others to follow. The book emphasizes a warning that species extinction is real, is primarily a result of habitat loss, and areas like Mindo are not necessarily safe. The future is unknown and with the advent of climate change, disease, encroachment, as well as many other detrimental factors not mentioned, we may be witnessing the last sanctuaries for these one-of-a-kind species. We need to do our part to spread the word and conserve what’s left. The publication of a field guide such as this is very important in bringing attention to the great variety of unique species and lending impetus to conservation efforts. Field guides like this one are also synergistic in bringing about increased conservation efforts and making a positive impact to curb the unprecedented rate of habitat loss. We recommend that you support the conservation of Mindo by purchasing the book, learning about Mindo’s amphibians and reptiles, and joining in the conservation efforts of the area (or other similar areas throughout the world) through ecotourism, conservation research (e.g., citizen scientists), and other avenues of endeavors and conservation activism via your individual expertise and enthusiasm to conserve all life on earth, including our own species. No matter who we are (average or exceptional, and all other categories as well) we all can make a positive difference in protecting and conserving earth’s unique and precious life systems and diverse biological life (see also Conrad and Hilchey

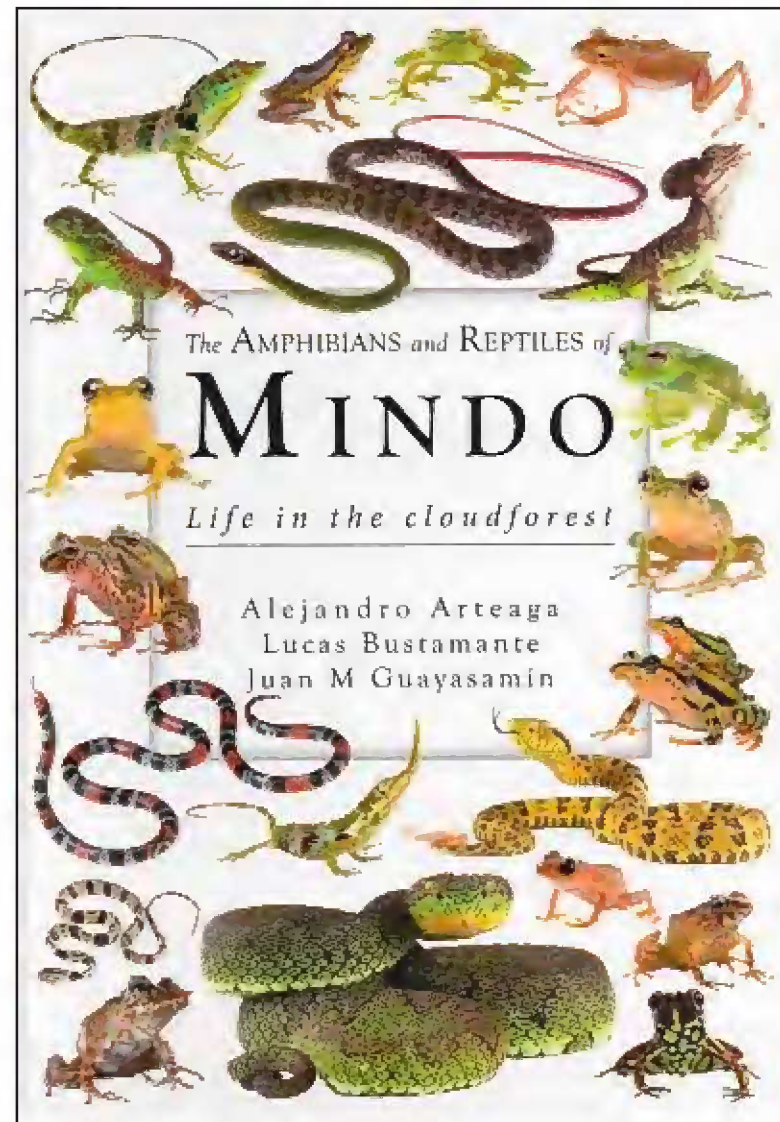


Fig. 1. Book cover of *The Amphibians and Reptiles of Mindo: Life in the Cloudforest*. Photo by Howard O. Clark, Jr.

2011; Johnson et al. 2014), for which amphibians and reptiles form an exciting component.

Literature Cited

- Arteaga A, Yáñez-Muñoz M, Guayasamin JM. 2013. A new frog of the *Pristimantis lacrimosus* group (Anura: Craugastoridae) from the montane forests of northwestern Ecuador. *Serie de Publicaciones Científicas* 1: 198–210.
- Conrad CC, Hilchey KG. 2011. A review of citizen science and community-based environmental monitoring: issues and opportunities. *Environmental Monitoring and Assessment* 176(1–4): 273–291. doi: 10.1007/s10661-010-1582-5
- Johnson MF, Hannah C, Acton L, Popovici R, Karanth KK, Weinthal E. 2014. Network environmentalism: Citizen scientists as agents for environmental advocacy. *Global Environmental Change* 29: 235–245. <http://dx.doi.org/10.1016/j.gloenvcha.2014.10.006>



Howard O. Clark, Jr. is a Certified Wildlife Biologist® with 20 years of professional wildlife experience. He focuses his time on the fauna and ecosystems of Northern, Central, and Southern California, and the Mojave Desert. He regularly works with the San Joaquin Kit Fox, Giant Kangaroo Rat, and the Mohave Ground Squirrel. He currently volunteers as the Layout Editor for the journal *Amphibian & Reptile Conservation*.



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